

## CLAIMS

1. A device for spraying an additive diluted with a diluent therefor, consisting of:

- 5       - a diluent container (1);  
      - a further container (2) for a said additive;  
      - at least one mixer (6);  
      - conduits communicating said diluent container and  
additive container (1 and 2) with said mixer (6) for  
10 allowing the dilution of the additive by the diluent from  
said diluent container (1);  
      - spraying means (7) connected to receive the output  
from said at least one mixer with a constant flow rate and  
to spray it at a spray zone; and  
15       - means for transporting a solid product to said spray  
zone to receive the additive;  
      - wherein in said conduits there is a respective  
regulation valve (5) per liquid associated with the first  
mentioned and further containers (1, 2); there are dilution  
20 control means for controlling said regulation valves (5) to  
control the rates of flow of the diluent and additive to  
said mixer, said dilution control means being responsive to  
the flow of solid product being conveyed by said  
transporting means to control the rate of flow of the  
25 additive in proportion to the flow of solid product, and  
being effective to vary the flow of diluent in response to  
the desired total flow rate of liquid to said spraying  
means to maintain a constant total flow rate;  
      - characterised in that the spray nozzle is aimed  
30 towards a conveyor for a solid product to be sprayed, and  
in that the control means are in the form of a  
microprocessor responsive to the weight of solid product  
present on the conveyor.

2. A device according to claim 1, characterised in  
35 that one or more conduits connecting a diluent container or  
an additive container to a mixer are associated with

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5. A device according to any one of claims 1 to 4,  
10 characterised in that there are several said further  
containers communicating with a common said mixer (6);

15        6. A device according to any of claims 1 to 5,  
characterised in that a flow of gas is provided to the  
spraying means to assist the spraying at a constant rate.

25 - in that liquid is pumped by the or each additive pump (3) from the additive container (2) as far as a flow meter (4) for the additive and then introduced into an additive regulation valve (5) before being introduced into the mixer (6);

8. A device according to any one of claims 1 to 5, characterised by several spraying systems (7) each able to be adapted to the throughput of solid product.